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ADDRESS ALL COMMUNICATIONS TO

THE EXCAVATING ENGINEER PUBLISHING COMPANY

BRADLEE VAN BRUNT, Manager and Editor

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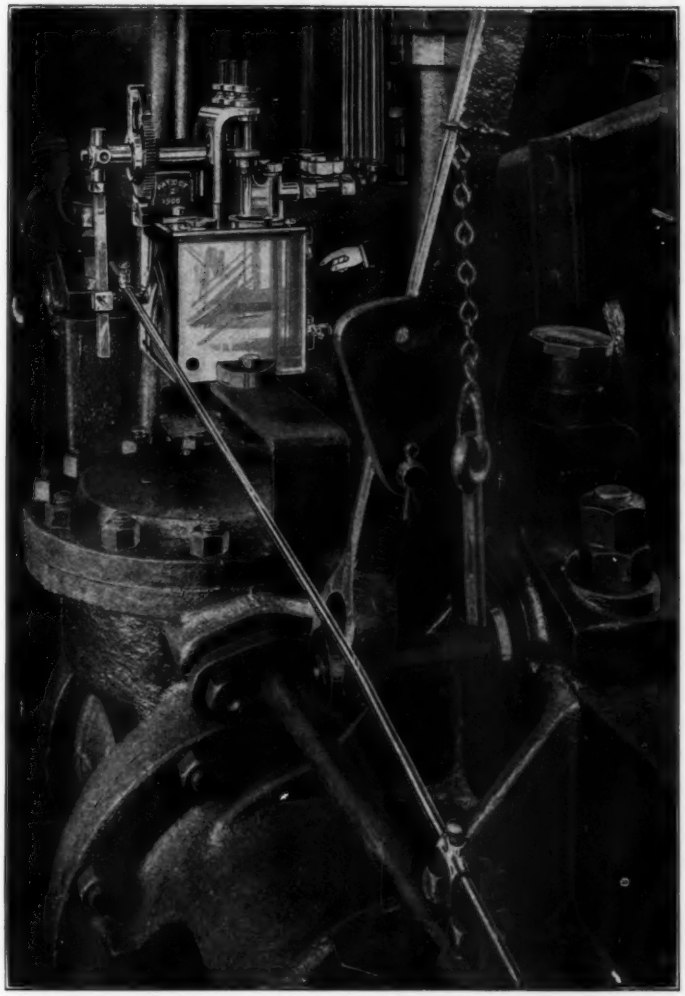

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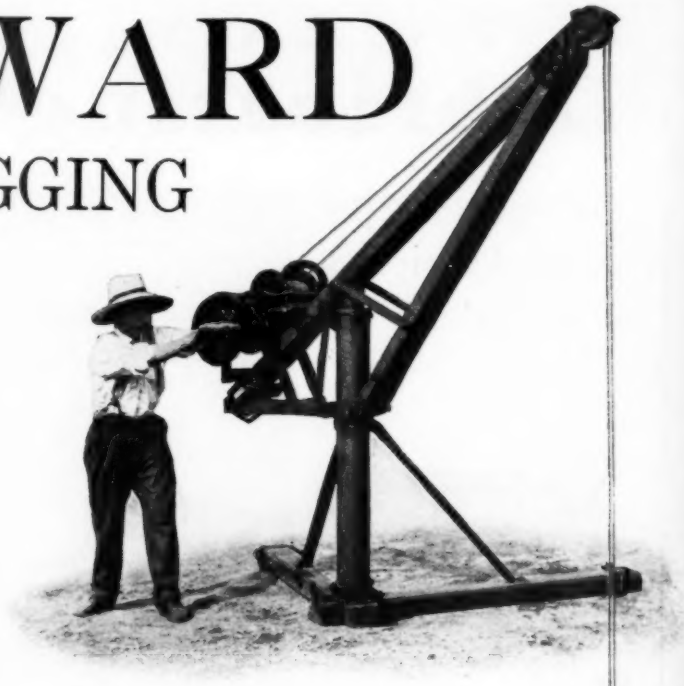

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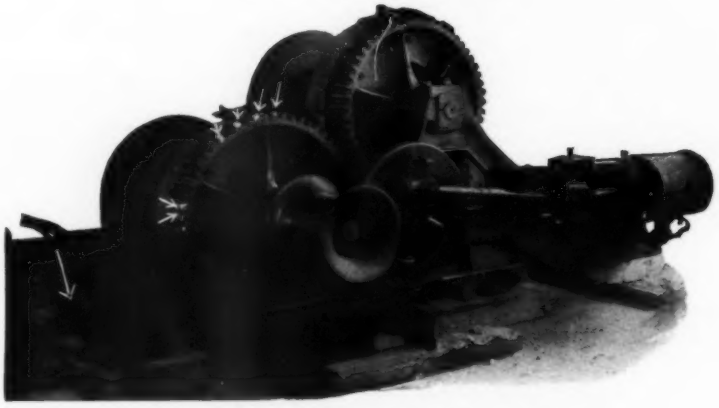

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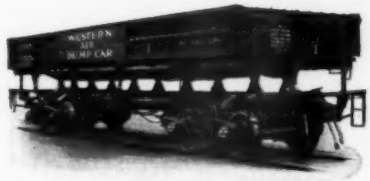

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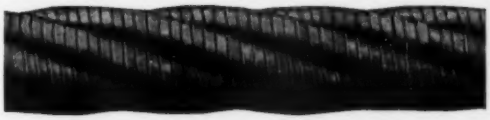

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Looking Up the Through Cut of the Pit. 70-ton Vulcan and 18-B Bucyrus Shovels Loading Hopper Car

Looking Toward Plant from the End of the Pit. Shovels Loading Hopper Cars in Foreground. C. & N. W. Trestle in Background. The Plant may be Seen in the Distance

The Excavating Engineer

Vol. 11 AUGUST, 1915 No. 11

The Plant of the Atwood Davis Sand Co., Beloit, Wis.

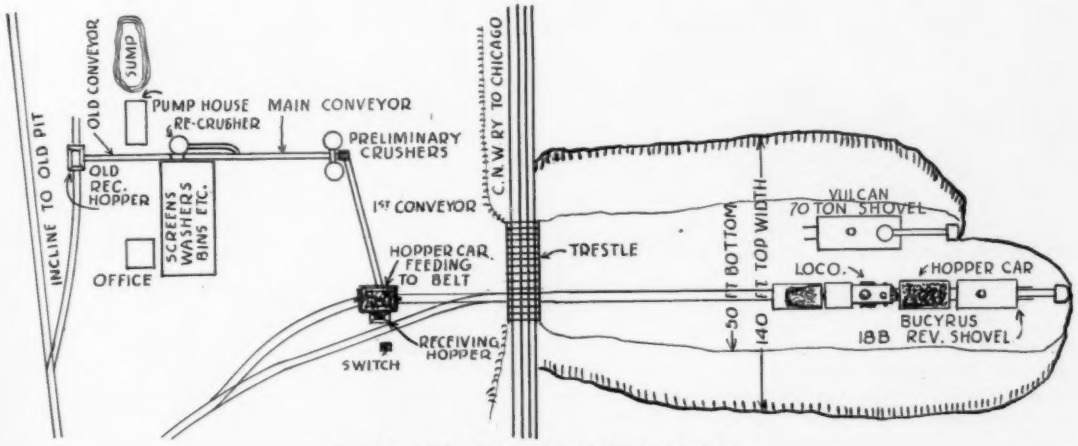
How it was found economical to use a revolving steam shovel in advance of a standard railroad type shovel in order to make a half mile throughcut in opening up a new sand and gravel pit. Ingenious methods of operation described.

THE Atwood Davis Sand Company of Beloit, Wisconsin, are employing a most ingenious method of shovel operation in opening up their new pit west of the plant, a method which has worked out in a very successful manner. The plant and tracks cover about 20 acres of ground west of the old pit, which consists of 37 acres, same having been worked out in the past ten years.

This property lies on the other side of the Northwestern double tracks, which run about 100 feet from the crusher plant.

Problems Encountered

Operations were started on the new pit on April 7th, of this year. The problem which confronted Mr. George B. Harker the superintendent was twofold.



Plant and Pit of the Atwood Davis Sand Co.

The plant is situated about one mile south of Beloit on the Madison Divison of the Chicago and Northwestern Railway. About three years ago it became apparent that the pit then worked would soon be exhausted. Negotiations were at once commenced for obtaining an option upon 80 acres of an excellent bed of sand and gravel, covered with but three feet of overburden to the west of the old pit.

First—It was necessary to tunnel under the double track of the Northwestern Railway and construct a bridge without interfering with the traffic or holding up the plant.

Secondly—This also called for the opening up of a thoroughcut a half mile in length (the depth of the new property), with a bank 38 feet in height, having a top width of 140 feet and a 55-foot bottom.

The Company at this time had a 70-ton Vulcan shovel with a 3 cubic yard dipper. Although this shovel alone had sufficient capacity to supply the plant under ordinary conditions, obviously this was impossible when carrying a thoroughcut. Consequently the Company found it necessary to use an 18-B. Bucyrus revolving shovel, equipped with a ⅞ cubic yard dipper, fitted with a sand lip. This shovel had been used in 1914 for stripping and for excavating the appraoch to this cut up to the railroad embankment.

Construction of Bridge

Falsework for the bridge was driven under the outside or far track, the piles being driven to a depth varying between 9 and 12 feet. There were 9 bents, 12 feet apart, with 5 piles to the bent. The steel and bridge timbers were then placed. This track was then thrown open to traffic and the first track was torn up to allow the shovel to excavate up to the false work which had been driven under the far track. Then the piles for the permanent bridge were driven, having a 36-foot span, on which was placed a 40-foot iron girder. The near track was now thrown open to traffic and the far track and falsework, first driven, were removed. The wide span under the first track was necessary in order to allow the revolving shovel to operate between the piling,while excavating the material from under the far track. After the shovel had dug through and passed the far track, then the permanent bridge was put in for the far track.

The bridge was completed in 21 days without delay to railroad traffic, the plant only being delayed two days, as the material taken from under the bridge happened to be marketable sand and gravel.

Working the Throughcut

The method of working the thoroughcut in order to get the greatest possible output, is as mentioned before, most ingenious.

The Vulcan shovel is proceeded by the revolving shovel; the latter carries 2-3 of the breast with a height of 38 feet, which cut, as stated, measures about 140 feet top width. Ties are laid in front of this shovel as it advances. On these ties are placed, parallel to the direction in which the shovel is traveling, 5 foot 6 inch blocks, made of two 6 inch by 8 inch timbers bolted together. Two of these blocks form the foundation for a timber float, 5½ feet wide 14 feet long 6 inches thick. The shovel operates with three of these floats. The blocks between the ties and floats are used to keep a space so that the rails can be slid in under the float, as this standard guage track serves as the loading track for both shovels.

The big shovel follows the small one to the left. The shovels are so placed that both load the hopper car at the same time, as may be seen from one of

The Plant. Hopper Car at Left Feeding on Belt Leading to Preliminary Crushers which are in House in the Foreground. The Far Edge of the Abandoned Pit may be Seen in the Background.

our views. The time consumed for this operation averages about 2½ minutes a car. Two cars are used with one 55-ton locomotive. Each car has a capacity of about 22 cubic yards. When the plant is in full swing a car is brought to the shovel every 8 minutes.

The average output per day under ordinary conditions is 45 cars or about 1350 yards in ten hours. This output can easily be increased to 1600 cubic yards or 55 cars a day. It might be added that while the shovels are waiting for the car, the 18-B in order to keep ahead of the Vulcan, overcasts in front of the latter.

It is planned to abandon the revolving shovel when the thoroughcut is made and use the Vulcan shovel only for that work.

Hopper Car Feeding on Belt. Note the Flow of the Gravel, and the Extra Bunker on the Locomotive's Tender Described in our Text

The Pit Equipment

One device, unique with the plant, which Mr. Harker has devised, is the use of hopper cars which we have mentioned. These cars obviate the use of a receiving hopper over the belt and consequently the necessary hump or grade of about 22 feet in order to bring the cars over the mouth of this hopper. This device greatly simplifies the track lay-out. Each car is equipped with a device whereby the material is fed under control on the conveyor.

From one of our views, it can be observed that the tender of the locomotive has been extended to carry on its rear end, a coal bunker. This bunker holds a days supply of coal for both shovels. It is loaded by the night man. This arrangement has been necessitated by the impossibility of getting coal to the shovels without greatly delaying operation. By this ingenious method of Mr. Harker's, no delayed is incurred.

The water supply for the shovel boilers is obtained by ¾ inch ejectors connected by means of 20 feet of 1 inch suction hose to 1¼ inch well points driven to a depth of about 10 feet. It is only necessary to drive a well point once to every 40 feet that the shovel moves ahead. The shovels are working at water level.

It will be observed from our sketch that provision is made for a double track over the receiving end of the first conveyor belt, so that one or the other of the two hopper cars are continually feeding onto the belt. The conveyor is fed by one spout, located between the two racks. Consequently the material is delivered from the right side of one car and the left side of the other, so that one car can be discharged from one track while the second car is being loaded and brought up. An interlocking switch device operating both switches at the same time, has been designed by Mr. Harker.

The Plant

The plant itself is equipped with Stephens-Adamson Mfg. Co. machinery; mainly after the design of Mr. Geo. B. Harker, the superintendent. It is electrically operated throughout with unit drive motors. The material is fed from the hopper cars on to an 8-ply, 30-inch conveyor belt measuring 115 feet in length, between centers. This belt has an elevation of 22 feet and is driven by a ten H. P. motor. It delivers the material over a taper-bar grizzly. This grizzly has 16 bars 9 feet long spaced 1¼ inches on the upper or delivery end and 1¾ inches on the lower end, in order to prevent clogging. The oversize is fed to a pair of No. 4 Gates crushers which reduce it to 1¾ inches. The two crushers are only used when the plant is fed to full capacity. The advantage of having the pair is obvious, as under ordinary conditions, one may be used while the other is being repaired, without delaying operations. These crushers are driven by 20 H. P. motors.

From these crushers the gravel is fed on the main conveyor belt on top of the sand and small gravel that passes through the grizzly screen. This belt is 8-ply, 30-inch and 374 feet long. It carries the material to the top of the plant, where the re-crushing, screening and washing machinery are placed. Gravel over 1¼ inches in size is re-crushed by a 36-inch Symons disk crusher driven by a 35 H. P. motor.

The washing and screening plant consists of 6 sets of screens which screen the gravel into four different sizes. These screens as well as the main conveyor, are driven by a 35 H. P. motor. The last two sets of screens deliver what is known as the No. 2 and No. 0 sand into four settling tanks, two for each screen. Here the sand is separated from the mud and clay which passes off in solution. All four of the settling tanks were designed and built under Mr. Harker's supervision.

The water for the washing plant is obtained from a sump 250 feet long, 40 feet wide, and 8 feet deep, in which a good supply is always obtainable, as it is dug below the water level. This water is pumped by a Fairbanks-Morse 6-inch centrifugal

18-B Bucyrus Digging Under C. & N. W. Tracks After Piles had been Driven and Girder Placed

pump driven by a 20 H. P. motor at 1100 gallons per minute to a 74-foot elevation.

All motors are of the General Electric type.

The Bucyrus 18-B shovel is operated by Gene Bumsted and the Vulcan by G. C. Ranets, and craned by Hugh Chenowith.

The changing over from the old pit to the new property, meant the changing from steam power to electricity, also the building of a new conveyor to the west side of plant instead of from the east side, the installing of a new Symons crusher, the moving of four Gates crushers from the plant to the new crusher house, also the building of a short conveyor from the hopper car track to the crusher house, instead of old style hoppers. Mr. Harker planned all this work and superintended all the construction and installation of machinery with the regular force of men that run the plant and shovels. This new work was done in the winter months while the plant was closed down, from December 16th 1914 to March 6th, 1915.

Mr. Harker claims to be the originator of both method of using the two shovels for thorough cut work, and of feeding the material direct on the belt from the hoppers. He claims both methods far superior to any other.

The Locust Mountain Coal Company Makes High Stripping Out-Put

From the Locust Mountain Coal Company's stripping at their Locust Mountain Colliery at Shenandoah, Pennsylvania, comes the report of one of the highest daily record for stripping that has been recorded in that vicinity for some time.

On June 24th, one of their many 70-C Bucyrus shovels digging in a 15-foot bank loaded 605 4-yard dump cars or approximately 2118 cubic yards of material in a ten hour day. During this period the shovel lost 105 minutes for moving up and 50 minutes waiting for cars, making the actual working time 7 hours and 25 minutes. The material handled was a face consisting of five feet of rock and ten feet of clay. Three Ingersoll-Rand drills were used continuously in front of the shovel. Three 22-ton locomotives were used each pulling a train of 7 4-yard Koppel cars. The dump was about one-half mile from the shovel with a 3% grade and a turn-out at each end. The labor around the shovel consisted of two men at the jackscrews and four in the pit, beside the regular shovel crew. The labor on the dump consisted of six men and one sub-foreman. The shovel was operated by John Lally, better known as "Kid", Pat Neary or "Buch" and Chester Williams the "Farmer".

On May 12th one of their 18-B Bucyrus revolving shovels with a 7/8-yard dipper loaded 213 four-yard cars of rock in 8½ hours, an excellent performance considering the material.

The stripping is being superintended by Pat Brown of Ashland, Pennsylvania with the able assistance of John O'Brien of Jackson, Pennsylvania. Too much credit cannot be given these men for the records which has been made, which as stated, is said to be the highest number of cars ever loaded in Schuylkill County. Mr. B. H. Stockett is general superintendent of the Locust Mountain Colliery. The Locust Mountain Coal Company are operating two 70-C and three 18-B Bucyrus shovels and one 175-B Bucyrus dragline excavator.

We are indebted to T. W. Earley, timekeeper, for the above information.

One of the Locust Mountain Coal Co.'s 70-C Bucyrus Shovels

Stripping the Balkan Mine with Dragline Excavators

The first instance where draglines have been used for stripping a big iron mine. Why this method was used instead of the usual steam shovel operation.

THE character and the depth of the overburden which covers an ore deposit has always determined whether or not open-pit mining is practicable. Until recently the Marquette, Menominee, Gogebic, Vermilion and Cuyuna Ranges have been worked for the most part by under-ground methods, whereas in the Missabi range under-ground mines are rare.

During the past year, however, extensive experiments have been made in stripping large tracts of these ranges by open-cut methods. The Wakefield Iron Company have been using steam shovel methods on the Gogebic Range, Butler Brothers doing the work with three 85-C Bucyrus shovels. This operation is illustrated in the November 1914 number of the Excavating Engineer. On the Cuyuna Range the Pennington mine at Ironton, Minnesota has been successfully stripped by the steam shovel method. This was described in the February 1915 number of the Excavating Engineer.

The Stripping Problem

Coincident with these operations a very interesting experiment was being made on the Menominee Range. On the famous Mastadon find of the E. J. Longyear Company at Alpha, Michigan, near Crystal Falls, the Verona Mining Company owned by Pickands Mather & Company are opening up the Balkan mine. This is the first instance where open-cut methods have been used on the Menominee Range except in the Iron River and Crystal Falls districts, where the overburden was unusually shallow. Consequently, the Balkan operations are being watched with much interest.

The conditions encountered are unusual. The overburden varies in depth from 60 to 100 feet, 15 feet of this on the north end and 80 feet on the south is a treacherous quicksand formation, which naturally presented a difficult problem. Bids were called for the stripping in March 1914, and the contract was let to Winston Brothers Company of Minneapolis. The contract originally called for the removal of 1,200,000 cubic yards before July 1915. Inasmuch as the mining company, however, has had some difficulty in handling the water in the pit during the cold weather and consequently could not comply with their part of the contract, operations were closed down last fall earlier than was originally expected and the time for the completion of the contract was extended to August first. Winston Brothers Company after a thorough examination, were convinced that the only way to handle the stripping satisfactorily was by the use of dragline excavators. This company has had more experience with this type of excavator than perhaps any other contracting concern. Their experience dates back as early as 1907 when six dragline excavators were used on their contract on the Puget Sound extension of the C. M. & St P. and also on some work on the Northern Pacific in Montana. These machines were used in changing the channels of rivers. In 1910, two other dragline excavators were used by them in Washington, Wisconsin and Illinois. Since that time they have purchased, besides the two machines mentioned in this article, two Bucyrus class 20 dragline excavators which have been used on various pieces of work, including the Calumet-Sag Channel near Chicago. Consequently, Winston Bros. Co. were very familiar with the possibilities of this type of machine.

Although dragline excavators have been used for stripping overburden from coal and phosphate deposits, this is the first time that they have been used to any great extent on iron ore.

Owing to the presence of quicksand and water, it was forseen by the contractors that steam shovel operation would have been out of the question, inasmuch as this type of machine has to work in the bottom of the pit. The dragline excavator on the other hand, has the advantage of digging below its own foundation, while it rests on the original ground level where a firmer foundation can be obtained. Furthermore, the dragline excavator has the advantage of depositing the material above or on its own level. Consequently, it is not necessary to run the dump car tracks into the pit. This naturally saves a considerable amount of equipment and a great deal in time and labor expended on keeping the tracks in good condition. The wide radius of action of the dragline renders it unnecessary to move the tracks frequently, and also makes it possible to keep at a safe distance from the edge of the excavation and thus prevent the caving of the material. The radius of the action is also increased by a good operator who should be able to throw his bucket as far as 30 feet beyond the end of the boom.

Class 24 Bucyrus dragline stripping

Loading 4-yard cars through hopper

General view of stripping operations

Drainage ditch. This shows quicksand formation and character of digging

Stripping the Balkan Pit, Alpha, Michigan

Method of Operation

The Balkan pit is oval in shape. When the stripping is completed its long axis will be about 1,200 feet and its greatest width about 700 feet, and the depth will run from 86 feet to 107 feet.

Class 24 Bucyrus Swinging Hopper

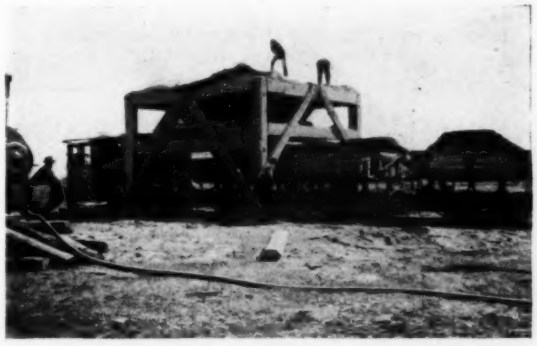
The machines used are a Bucyrus class-24 dragline excavator with a 85-foot boom and a 4½ yard bucket and a Marion model 261 of the same size. Both machines are mounted on skids and rollers. They travel on 4″x12″ planks 12 feet long, placed 4 wide on each side of the machine. Dragline operation was started on May 16, 1914, and is approaching completion at the present time.

As stated before, the greater portion of the overburden consists of a quicksand formation which before being drained is nothing more nor less than soup. The mining company is responsible for the draining of the pit. In order to accomplish this, a drop shaft, 10 feet by 10 feet inside diameter was driven, and drainage ditches dug in the pit in order to divert the water to this sump. The water was pumped out by a centrifugal pump at a head of 80 feet, the power being furnished by a 40 horse power Westinghouse motor. This drop shaft, however, was used only a short time on the second lift, as it was impossible for the mining company to sink the shaft in the quicksand. Since then, the contractors have excavated the sump at the beginning of each lift, from which the water was pumped by the mining company. While the draining of the lower levels is going on, the machines are operating on the higher levels. This method has been most successful, as it has been discovered that when this quicksand formation is drained to a depth of from 3 to 4 feet, it offers a very substantial foundation for the draglines.

The two dragline excavators have been used on opposite sides of the pit, for the most part on different levels. The incline is a continuous spiral, the grade being about 2.6 per cent with 35-degree curves and slopes at two to one.

The sharp curves, as well as the heavy grades from the lower levels, which have been necessitated by the small diameter of the pit, have rendered it impossible to use standard-gauge equipment. Consequently, narrow-gauge 4-yard cars are used. Inasmuch as the large buckets of the draglines could not load cars of such small capacity without a considerable amount of spilling and the consequent danger of derailments, large hoppers are used which are shown in some of our views. The trains are run underneath these hoppers. This method has proven most satisfactorily. It is interesting to note that instead of lining these hoppers with sheet iron, hard maple has been used, as this has been found to offer a better sliding service for the sticky material encountered.

On the first or top lift, each dragline was served by three trains made up of ten 4-yard cars each, but at the present time the contractors are using nine trains and twelve locomotives, three of which are used as pushers on grade out of the pit. As before mentioned, the grade on the spiral incline from the bottom of the pit to the surface, is 2.6%. The distance from the first switch at the bottom of the incline to the dump is 5,650 feet. The trains climb 146 feet in going that distance, an average grade of nearly 2%.



Loading 4-yard Western Cars through Hopper

Dragline Output

The out-put of the draglines has been most satisfactory and has compared very favorably with steam shovel operation on the Missabi range. The material, however, is ideal for dragline work. As stated, the upper portion of it is a quicksand which when drained, is easy to dig. Before operations were started, a small creek ran across the pit. The waters of this creek have been diverted, but the bed contains a rather heavy gravel formation. On the northern end of the pit, deposits of blue clay, gravel and hard-pan have been found, while gravel and hard-pan exist under the sand at the southern end. The machines are swinging through an arc

of about 180 degrees and making a cycle in about 40 seconds. The capacity of the draglines depends of course to a great measure, on the car service. The best monthly out-put for both machines working two 10-hour shifts is 207,184 cubic yards, and the best daily out-put for both machines working two 10-hour shifts is 2,670 four-yard cars. The best record for one 10-hour shift was made by the Bucyrus machine, namely 800 four-yard cars.

During the season of 1914, the total out-put was 896,421 cubic yards. Operations were closed down early in November and work started again on April 15th of this year.

The estimate for the month of May this year, was 123,886 cubic yards making a total to July 22nd of 1,224,900 cubic yards. As we go to press nearly all the pit has been uncovered and the final clean up will be completed by August 1st.

Drilling on Ore and Hardpan on Third Lift. Class 24 Bucyrus Loading

General View of Pit, Class 24 Bucyrus in Background and Pump House in Foreground

Winston Bros. Company have just completed negotations with the Balkan Mining Company for the loading of 200,000 tons of iron ore during the forthcoming season. This work will be started on August 1st and is to be finished before the close of navigation. The same equipment and organization will be used.

A total of 170 men are employed in the pit. Mr. C. S. Whitaker is superintendent.

Ore Loading Record on the Gogebic Range Again Broken

On page 334 of the June issue of the Excavating Engineer, there was published a short article stating that the ore loading record on the Gogebic Range was held by the Colby Mine of the Corrigan-McKinney Company of Cleveland, Ohio, whose 70-ton Bucyrus shovel loaded 150 cars of 6615 tons of ore from the stockpile in ten working hours.

On Saturday, July 3rd, 1915, the Newport Mining Company of Ironwood, Michigan broke all previous records. In ten working hours, 162 cars were loaded. The official railroad weight of these 162 cars was 8094 tons of ore. In this performance, the ore was loaded in the usual manner and no edges were left.

The shovel which was a 70-C Bucyrus was in charge of Herb Wright, surface foreman, and was operated by Dennis Harrington who had as a cranesman, Dom. Liberato. The record was made by the regular crew which consists of a shovel runner, a cranesman, a fireman and six pitmen.

Previous to the loading of the 162 cars on July 3rd, the Newport Mining Company with the same shovel crew loaded 147 cars on June 21st, and the official railroad weight on same was 7140 tons which performance broke the previous Range record with reference to tonnage loaded in ten hours.

In both of above performances, the cars were spotted by the Chicago and Northwestern Railway Company.

The Record-Holder, the Newport Mining Company's 70-C Bucyrus

Fast Grading Work in Milwaukee

A 7/8-yard revolving shovel loads 518 two-yard dump wagons in five hours, including all delays.

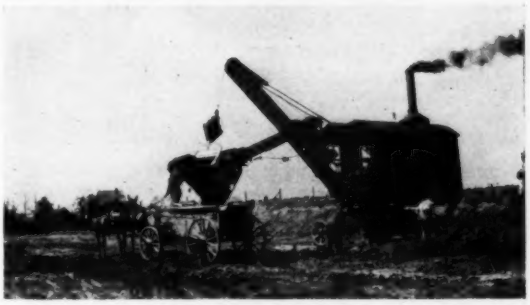
F. J. Mann, railroad contractor, of Wauwatosa, Wisconsin, is grading 23 acres of building lots for Nathanael Greene of Milwaukee, between White Fish Bay Road and Oakland Avenue in East Milwaukee. The excavation which amounts to about 42,000 cubic yards covers about 10 acres, and is being used for filling in 13 acres of property.

Although the work is an average steam shovel job, there are a number of features of interest connected therewith.

Mr. Mann is using an 18-B Bucyrus revolving shovel with a 7/8 cubic yard dipper and twelve teams of two-yard dump wagons, Western and Stroud.

The average cut has been about five feet and the material for the most part, a loam, easy to dig but a little hard to shake from the dipper in wet weather, of which a great deal has been experienced.

The average haul is between six and seven hundred feet.



Loading Wagons

Under the supervision of Mr. F. J. Mann, Jr. the job has run very smoothly. There has been little delay except that caused by wet weather and the shovel has worked steadily. The shovel according to Mr. Mann, has averaged 800 cubic yards per 10-hour day throughout the job, despite the bad weather.

F. J. Mann's 18-B Bucyrus Shovel at Work in East Milwaukee

Taking Water

On one occasion, when no particular attempt was being made for a high record, Mr. Mann counted 518 two-yard wagons loaded in five hours. This five hours included all delays for taking water, moving up, waiting for wagons, etc.

Despite the good wagon service and the short haul, the shovel more than kept the wagons moving, in fact more could have been employed to good advantage.

The shovel, as shown in one of our views has been working on four platforms which have greatly facilitated the operation, especially in wet weather.

Water is taken from a tank wagon, also illustrated. Four tanks are used a day. Three minutes are required to take water. The tank wagon has approximately the same capacity as the shovel tank.

C. F. Porter is operating the shovel and John Weinholt, firing.

Swinging a Platform

Fast Shovel Work on The Intercolonial Railway of Canada

A class 45 Atlantic type shovel digs 15,070 cubic yards in one weeks time.

In the Portage Pit of the Intercolonial Railway of Canada in New Brunswick, there have been made of late some good yardage records.

The shovel used is a class 45 Atlantic type shovel equipped with a 2½-yard dipper. The machine is working in very heavy gravel which handles in very much the same manner as iron ore. The cut has a face of 35 feet in height and the material is loaded into Hart convertible cars. Six trains are used, made up of 15 to 20 cars per train. These are hauled along the line of the Intercolonial to a distance varying all the way from 6 to 100 miles. In order to cut down this haul the shovel will soon be moved into another pit.

The shovel started working on June 5th of this year and for the first week when the machinery of course was somewhat stiff, it succeeded in loading 15,070 cubic yards of gravel. One ten-hour shift

Class 45 Atlantic Type Shovel at Work on the Intercolonial Railway

was worked with some over-time. The delays varied from one to three hours per day waiting for cars.

The shovel is operated by Thomas Carroll. Ed. Gambell is cranesman and Ross Murray fireman. W. A. Fitch is superintendent in charge.

Record Steam Shovel Out-Put on the Cuyuna Range

The Pennington Mining Company of Ironton, Minn. reports some very high yardages made of late by their 85-C Bucyrus Shovel. In ten hours, this machine equipped with a 5-yard dipper, loaded 315, 20-yard cars. In the month of April, 1915, in two ten hour shifts, it loaded 180,000 cubic yards. From March 5th to June 1st of this year, it handled 455,000 cubic yards. The material was for the most part coarse sand and gravel. Mr. J. C. Lutes is superintendent.

A countryman on a visit to a city happened to see a sign; "Cast Iron Sinks." He looked at it a moment and then said, "Any fool knows that."—*Ideal Power.*

The Excavating Engineer

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THE EXCAVATING ENGINEER PUBLISHING CO.

Bradlee Van Brunt, Manager and Editor
267 National Avenue Milwaukee, Wis., U. S.

Construction Outlook

Although general business conditions are better than at any time since the beginning of the war, there has not been much of an improvement in railroad construction. As we stated last month, we cannot expect any great improvement for some time to come, although indications seem to point to the fact that the railroads are gradually doing more work and are gaining more confidence. This is shown by the fact that there has been a decided improvement in the number of orders placed for railroad equipment.

Every field of construction work has shown an improvement during the last month. Highway work is active, especially in New York, Ohio and Pennsylvania. A considerable amount of drainage work has come up and the Government has let some big dredging jobs for river and harbor work, as well as some levee contracts. It is possible also that the Reclamation Service may plan some construction in the near future.

The quiet and gradual increase in the volume of business is very marked, but there is bound to be a lull before very long when the plants of the country, particularly those taking war orders, have reached their capacity. This lull should not cause alarm as it is safe to say that war orders will continue for some time to come. We believe that there is no reason for discouragement and that the general improvement above mentioned is eventually bound to result in a general prosperity, which will in good time revert to the railroad construction field.

If We Fight What Would You Do?

The war finally seems to have awakened the thinking people of this country to a situation, which, secure in our isolated position, few of us have heretofore taken seriously. We speak of the grave necessity of strengthening our ability to defend ourselves in the hour of need. The inadequacy of our national defense is a fact that no one can question. Unfortunately we no longer can honorably consider ourselves as unaffected by the trend of world politics. With our wonderful growth in power and influence, we have become a world power and we must accept the responsibility of a world power. As a nation, we have a deep confidence in the ability of those at the helm to keep us free from entangling alliances, but it does not take a great stretch of imagination to realize that circumstances may develop, and develop soon, which may force us to fight for our national honor. The time has passed when a foe may be driven from our shores by a million American farmers with shot guns. War has become one of the greatest of sciences and as such, requires preparation. We are not adequately prepared. Each one of us bears a responsibility.

We are not fully meeting this responsibility by offering to fight when we are called upon to fight. It is the duty of each one of us, individually, to ascertain now, not then, how we can equip ourselves to fight best should our country call. Here is where our greater responsibility rests.

H. G. Puffer with Canadian Equipment Company

The many friends of Mr. H. G. Puffer will be interested to learn that he has recently joined the staff of the Canadian Equipment Company, Ltd., the representatives in Eastern Canada for the Bucyrus Company and the Western Wheeled Scraper Company. Mr. Puffer has earned his promotion with hard work and valuable experience. He was born in Ontario forty-three years ago and started work for contractors on the Ship Canals along the St. Lawrence River. He left Canada for the United States about twenty years ago and has worked in the capacity of steam shovel engineer, master mechanic and superintendent for many of the most prominent contractors in this country. A few years ago he returned to Canada and has been in charge of contracts on the power development scheme of the Canadian Light & Power Company at Valleyfield, P. Q. on the government dry dock at St. John, N. B. and the Quebec water supply. He has a large acquaintance among contractors and railway officials in Canada and has the happy faculty of making friends wherever he goes.

The Balkan Pit of the Verona Mining Company at Alpha, Michigan, showing the two dragline excavators stripping the overburden distinguished the pumping operations under way. A good idea of the treacherous character of See article on p

40-R Bucyrus shovel owned by Anders Bentz, contractor, at work on the Riddarhyttan-Lerklockan-Persgrufvan-Backegrufvan Railway in Sweden. The shovel has been working with complete satisfaction since May first of last year. It has encountered very hard digging with large boulders. In spite of this fact, the engineers report that the repairs have been so slight that they are not worth mentioning. The shovel is operated by K. E. Jonsson and craned by P. Anderson.

overburden from the iron ore. This photograph gives a very good general idea of the operations. In the bottom of the pit may be
hazards of the quicksand may also be gained. In the background to the left may be seen the dump.
article on page 413.

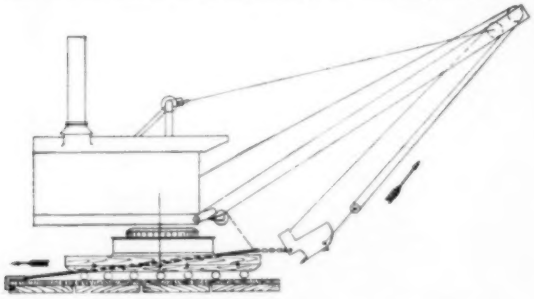
The Thompson Pit of the Inland Steel Company on the Cuyuna Range at Crosby, Minn. showing 70-C and 85-C Bucyrus shovels stripping the overburden. This mine was opened by the stoping method but was afterward changed to open pit. The ore is now being mined by steam shovel. W. Wearne is general superintendent and Walter Golgren, local superintendent.

FIELD NOTES

DISCUSSION IS INVITED FROM MEN IN THE FIELD ON SUBJECTS HERE PRESENTED

How to Move a Dragline Excavator when Operating in Soft Material

We have recently been advised of an ingenious method employed by the Winnipeg Aqueduct Construction Company for moving their dragline excavators over the soft material in which they are digging. The material is called muskeg, which is nothing but a decayed moss and vegetable matter, so soft that it is impossible to get a firm hold with the bucket without digging from four to six feet until clay is encountered. This operation naturally causes considerable delay. The following effective method was evolved to overcome this trouble by Mr. E. P. Hayward, the Bucyrus erecting engineer.

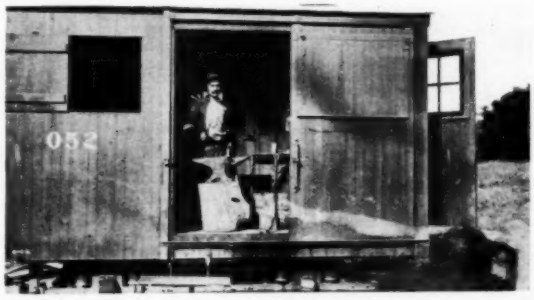


The draglines are all operating on four platforms. When a machine is ready to move and the platform in the rear of the machine is swung and dropped in place in front of the machine in the direction in which it is desired to move, the dragline is swung facing the rear. A twenty-foot chain, or better yet, a cable, is hooked by means of a clamp onto the platform which has just been dropped in front of the machine. This cable is run under the base of the machine and the other end is hooked through the bucket chain. When the bucket is hoisted, the machine moves ahead easily in the direction desired. With this method, the machine is ready to dig in five minutes.

A Blacksmith Shop on Wheels

The Wilkes-Barre Railway Company have had in commission on their lines in connection with their Bucyrus electric revolving shovel, a blacksmith shop on wheels which has resulted in effecting a considerable saving, not only in the maintenance cost and repairs but in actual operating time. Although this shop was designed particularly for electric railway work, a description thereof might offer some valuable hints for railroad contractors.

As shown in the photograph, the truck used was an old passenger coach truck on which was built the box car as illustrated. The shop has a very complete equipment consisting of a portable forge, an anvil, a vice bench and a drill press with a complete outfit of blacksmith tools.



The Wilkes-Barre Ry. Company's Blacksmith Shop on Wheels

The class of work which it was used for was the sharpening of tools and making minor repairs all along the line.

It is said that the saving to the company resulting from this shop amounted to no less than one hundred dollars a month in the sharpening of drills, picks and other tools alone. In addition to this, an enormous amount of time was saved in the delays which are apt to occur when a shovel is in a rock cut and it was necessary to resharpen the drills frequently The car was built entirely to the design of Mr. Edward Rees, master mechanic, to whom we are indebted to the above information.

Blasting Hints

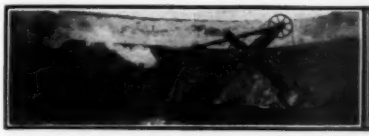
Loading Holes in Soft Rock

Where trouble is experienced by material falling into the hole from soft, loose strata near the top, if dynamite is the explosive in use, the hole may be filled with water before loading. This prevents the choking of the hole from falling earth and rock, as the pressure from the water either cements the fine material in place or prevents it from falling out.

—Du Pont Magazine

Mrs. Nexdore (angerily)—I want you to keep your dog out of my house; it's full of fleas.

Mrs. Naybor—Your house is? Mercy! I certainly shan't let Fido go in there again.—Boston Transcript.



DEVICES YOU OUGHT TO KNOW ABOUT

Albrecht Excavator and Loader Controlled by The T. L. Smith Co.

The T. L. Smith Co. announce that they have purchased the exclusive manufacturing and selling rights of the Albrecht Excavator and Loader and are in position to make prompt shipment of machines.

This means that one of the largest and oldest concrete mixer companies has entered the dirt moving field. As this Company manufactures a broad line of contractor's equipment the Albrecht excavator and loader can be handled to splendid advantage.

The Albrecht Excavator in Operation

For over five years the inventor, John H. Albrecht, has tried to market this really wonderful machine. A number of these Albrecht excavators and loaders were sold and are being successfully used in different parts of the United States. Lack of capital, however, prevented the successful development of the business. Realizing the immense field in which this machine could be used to advantage, The T. L. Smith Co. took over the entire business of the Albrecht Excavator Co. Backed by their world wide selling organization and with their immense resources, The T. L. Smith Company will be able to handle the ever increasing demand for this machine.

The Albrecht Excavator does away with the big gang of shovellers. The wagons do not have the long, heavy pull out of the pit and the snatch team is done away with, for the loading is done on the surface. Two men only are required to operate the equipment—one man in the pit to handle the scraper and one man to run the machine. A 12 H. P. horizontal gas engine, heavy duty type, provides ample power to dig and load 20 cubic yards per hour. This machine will dig at a distance of 100 feet from the machine and at any desired depth for ordinary excavations at the rate of about one round trip per minute. With this loader you can plow faster than with horses and load as fast as 10 men. It will dig at any point either above or below its level and over a big area covering a half circle back of the machine.

Additional information, prices, etc. can be secured by writing to The T. L. Smith Co., 1177-A 32nd Street, Milwaukee, Wis.

Pan-American Road Congress

The Pan-American Road Congress is to be held in Oakland, California, during the week of September 13-17. This Congress will be held under the auspices of the two leading national good roads associations, namely, The American Road Builders' Association and the American Highway Association. It has recently been decided that the date of the Pacific Good Roads Congress will be changed in order to conform with this, which will practically merge the meeting of the Tri-State Association with that of the Pan-American Road Congress.

A special train will be run through to the coast from New York to accommodate the delegates. Invitations have been received from various municipalities and organizations for the delegates to stop at points along the line in order to make special tours of inspection.

The Brick Manufacturers Plan a Trip to the San Francisco Exposition

In response to an urgent request from the officials of the Panama Pacific Internatioanl Exposition, the National Brick Manufacturers Association are proposing to hold a mid-summer meeting in San Francisco. It is suggested that if a sufficient number of the Association manifest an interest, Mr. Theodore A. Randall, secretary of the Association will plan a party to visit the clay plants and other points of interest en route and on the Pacific Coast. It is not the intention to make this a formal convention, but merely a social gathering.

SHOTS FROM THE FIRING LINE

Alabama

Brewton—An additional contract for construction work on Gulf, Florida & Alabama Railroad has been awarded to J. N. Gillis & Son, Brewton, Ala.

Alaska

Lieutenant Frederick Mears, of the Alaska Engineering Commission, has announced that the grade of the government railroad from Anchorage to Matanuska would be completed by November 1, and that the track would be down by December 31.

California

San Francisco and Vicinity.

By E. C. Hingston

Railroad, irrigation and drainage work in this section of the country is very scarce at this time, but we are in hopes that if Senator Newland's bill goes through, which calls for an appropriation of $50,000,000 a year for ten years, to be applied to irrigation in the Western States, that there will be considerable work in this line in the near future.

The greater part of the work being done in this territory now is for the state highways, of which we will doubtless hear a great deal at the Convention, which will be held shortly by the Tri-State Good Roads Association in conjunction with the Pacific Good Roads Association. Most of the work is being taken by local contractors, but in a few cases railroad contractors have been able to land some fair sized jobs,—all of which are progressing very nicely.

Palmer & McBride, contractors for the section of the Lincoln Highway, extending from Livermore to Altmont, through the Altmont Pass, have made an excellent showing, and would have completed their work in record time if it had not been for the shortage of water required for the concreting.

These contractors certainly deserve credit for the general appearance of their work, and for the speed with which the work has progressed.

J. T. Marshall is constructing a piece of highway from Los Gatos, through Alma, on the road from Los Gatos to Santa Cruez, and is progressing very nicely, handling most of his work with fresnoes. He has recently installed a shovel on his work, it will undoubtedly aid him greatly in completing his work on time.

Cornelia Copper Co. are preparing to start work on their mills, etc. at Ajo, Arizona, by building a railroad from Gila Bend on the Southern Pacific, 45 miles south to Ajo. Most of the work will be done with teams, as it runs through a flat desert country.

The attendance at the Panama Pacific Exhibition is keeping up wonderfully well, and there are many interesting things for the people interested in all kinds of manufacture, and it is a wonderful place to study the progress made by the world in recent years.

There has been very little happening in this territory in the last month, but there seems to be considerable work projected if it can all be financed. We are in hopes in the near future we will have better things to report from this territory.

Canada

Vancouver and Vicinity

By A. G. Brown

Messrs. Gurthrie, McDougall & Co. have resumed filling the flats at the head of False Creek for the Great Northern terminal buildings and yards. Matt. Glavin has charge of the outfit.

The contract for the snow sheds on the Kettle Valley Line has been let to Guthrie McDougall & Co. There will be 15,000,000 feet of timber required for this work. Geo. Rothwell arrived from Portland early in the month and is busy getting outfit assembled and camps located.

Messrs. Hodgson, King & McPhalen made a new Canadian record in building the Central Park trunk sewer for the Joint Sewerage Commission. During May they laid 2,309 feet of 27-inch concrete pipe at an average depth of 16 feet below the surface and at the same time completed 1,000 feet of tunnel six feet six inches in diameter in the vicinity of Central Park.

Up to the end of May over 1,500,000 cubic yards of material had been deposited by the C. N. P. Railway on its terminal track in False Creek. Of this amount 400,000 yards have been pumped into the area enclosed by a bulkhead extending traversely down the creek since the reclamation operations were resumed in January. A 64-acre section of the company's holdings are barricaded, the entire tract being nearly 165 acres. It is estimated that it will take 3,250,000 yards of dirt to reclaim the whole of the property.

The Georgia-Harris Viaduct, the cost of which approximates $500,000, was officially opened July 1st. It has been under construction for two years.

Over a thousand men are at present engaged in tunneling operations in the C. P. R. tunnel under Roger's Pass. It will be finished in the fall of 1916.

It is expected that grading on the Edmonton, Dunvegan and British Columbia Railway will be completed to Spirit River and Peace River crossing by October.

The contract for the building of the Spirit Lake-Grande Prairie branch of the Edmonton, Dunvegan and British Columbia Railway, now under construction by J. D. McArthur, has been let to G. H. Webster, of Calgary.

Notes from Winnepeg

Mr. J. D. McArthur has been in the city after being over the Edmonton Dunvegan Line which he is now constructing and report construction is progressing rapidly. Work on this line is mainly machine and scraper work.

Mr. D. McMillan, of McMillan Bros., who have contract from the Hudson Bay Construction Co. for the Hudson Bay Line from The Pas north to Hudson Bay, is in the City on business and states that work has been progressing very satisfactorily and has been delayed very little on account of the weather. this company have three 70-ton shovels operating on this work.

Despite the fact that it has rained almost continually for the past six weeks along the line of the Winnipeg Aqueduct, work has been pushed actively. The five Bucyrus class-7 dragline excavators are being operated by the following men:—George Young, Camp No. 1; J. W. Stevenson, Camp No. 2; C. Walgren, Camp No. 3; I. Johnston, Camp No. 4; F. Ralph, Camp No. 5. The Class-14 Bucyrus dragline at Camp No. 6 is being operated by W. J. McNulty.

Moncton, N. B.—A contract has been given by the Intercolonial Ry. to J. W. McManus & Co., Moncton, N. B., it is said, for building an industrial spur at Bathurst, N. B., 2.3 miles long.

Sault Ste. Marie, Ont.—A contract has been awarded to the National Engineering Company, of Cleveland, for the construction of the Lake Huron & Northern Ontario Railway, in Canada, running from Sault Ste. Marie to a junction with the Grand Trunk Pacific Railway between Cochrane and Hearst. The line

is to be 300 miles long and the estimated cost is $24,000,000. Active construction will await completion of the flotation of a bond issue being arranged by the National Engineering Company.

Edmonton, Alta.—A sub-contract is reported let to J. Timothy for grading the last 22 miles of the Central Canada Ry. to Peace River Crossing, Alta. Track laying has already been completed, it is said, to mile 28 from McLennan, where connection is made with the Edmonton, Dunvegan & British Columbia. The grading work yet to be carried out will be heavy. It is expected that the grading work will be finished by October 1, and track laying completed and the line ready for operation this year.

Edmonton, Alta.—Construction work is reported resumed on the Canadian Northern to St. Paul de Metis, Alta. About 14 miles of grading has already been finished; D. F. McArthur is the contractor.

Colorado

Denver and Vicinity

By H. N. Steinbarger

Maurice A Wogan of Denver is mighty busy these days. Moving a whole steam shovel outfit thirty miles over a new mountain road is the task. He was awarded the contract late in June by the Costilla Estates Development Company of Denver after several weeks of figuring and waiting. The contract is for the second unit of their large irrigation system and when complete will make it one of the largest in the southern Colorado district. Wogan built the first unit near San Acacio, Colorado, about three years ago, thus it was conceded by all that he was entitled to new work, especially as his outfit was located at San Acacio. His outfit consists of a model-60 Marion shovel, two locomotives and a string of Western dump cars, Austin gyratory rock crushing plant and about forty Western and Austin dump wagons. All of this is being moved from San Acacio across through the mountains, a distance of 30 miles, which in itself is some job. It's moving, however, and every one who knows Maurice knows that the whole outfit will keep on moving in jig time.

George S. Bedford & Son of Greely, Colorado, has completed his two year contract on the big dam of the U. S. Reclammation North Platte project near Minatore, Nebraska. From all reports they made a big clean up and are now ready for bigger undertakings. George S. spent a few days in Denver during July just looking around and renewing acquaintances.

Crook & Hoffman are just completing a nice job near Berthoud, Colorado, not a large contract, as it entailed moving only approximately forty thousand yeards, but a very satisfactory one in every respect. They have annexed several additional small jobs in the same district. Therefore altogether the move to the Berthoud district was a lucky one.

Mike has been to town just looking around, resting up and visiting. Mike Dooling, of course. There's only one Mike in the inter-mountain section. He reports excellent progress on the Dooling Bros. Burlington contract near Guernsey, Wyoming. They are working double shifts and expect to finish up about September next. Mike says that Charlie Dooling is running the night shift. Too bad, that is to say, it's good for the night shift but too bad for Charlie. Anyway the road from camp to Guernsey will have a chance to recover from the "burning up" it got every evening continuously for many months. 'Tis said that "absence makes the heart grow fonder" so we are of the opinion that it will all end well. Opinion of our informant of course.

Tom Gibbons ran down to Denver early in July. Business of course. Tom is all business. Nothing lags behind on the Gibbons Bros. contracts. Tom bought a 50 H. P. locomotive type boiler to install as an auxiliary unit, to be used while the main plant is down for cleaning and tuning up. After completing the purchase he returned at once to Guernsey, Wyoming. Their progress on one of the larger tunnels of the new Burlington line has been rapid and very satisfactory.

Estea Park—The F. C. Dreher Contracting Company of Denver are making a great record for themselves on the construction of the Fall River Road. This road is the first great highway artery through Estes Park over the Continental Divide. It is said that when it is completed this road will make possible one of the most beautiful scenic trips in this country if not in the world.

About seven miles have been completed on the eastern side of the Continental Divide, and about fourteen miles on the other side of the divide. The road on the eastern side for practically the whole distance was blasted out of the rocky sides of the mountains. The first work was done by convict labor. The most difficult portion has been completed. The work is being done under the state, but with the forthcoming year it is probable that with government aid at least two more roads will be built from East to West across the Divide.

Florida

Bartow—A. V. Wills & Sons, Pittsfield, Ill., and Paragould, Ark., were awarded the contract at $0.08½ per cu. yd., for the construction of 162 miles of drainage ditches including about 2 miles of levee work, building of bridges, weirs and sluice gate, for the Peace Creek Drainage District. The total yardage is estimated at 2,432,743 cubic yards. Bids were opened July 2. Benj. Getzoff is secretary for the District and C. G. Elliott, McLachlen Building, Washington, D. C., is engineer.

Idaho

Boise—The Utah Construction Co., Ogden, Utah, has signed a contract with the State Land Board for the construction of the Big Lost River Project in this state. The reconstruction of the dam about Mackay, Ida., is to be started at once, the dam to be capable of holding 110,000 acre feet of water. The Utah Construction Co. will expend approximately $1,500,000 on this Project.

Illinois

Marion—E. E. Headley & Son have their equipment, consisting of an 18-B Bucyrus revolving shovel together with wagons and accessory equipment, idle at this point. Mr. Headley is looking for a piece of work to keep his out-fit busy. Box 682, Marion, Ill. will catch them.

Chicago and Vicinity

By Forrest Fordham

Mr. Albert Hume, a member of the firm of Hume Bros., Buenos Aires, has been making a trip of inspection through the United States during the past few weeks inspecting the latest types of excavating equipment. Hume Bros. are large railroad contractors in the Argentine and are just finishing up some big contracts in that country. Mr. Hume says that there will be very little new work started until the war is ended and he is, therefore, taking this opportunity to see the latest developments on the equipment line.

Mr. M. E. Mogg spent the day of July 7th at the works of the Bucyrus Company in South Milwaukee looking over some of the latest 225-B coal stripping shovels. Mr. Mogg says that the Oak Ridge Coal Co. at Vicksburg, Ind. are running nicely and getting a large output of coal. This plant is using a 175-B Bucyrus stripping shovel and a special 35-B Bucyrus loading shovel. This loading shovel was the first machine of this type to be mounted on caterpillar traction and it has proved an entire success.

Mr. T. W. Crow, Mr. Harris and Mr. Wm. Buchanan were in Chicago on July 8th and 9th. Mr. Buchanan had just come from Montana where they are working on a large dragline contract on the Sun River Irrigation Project. This work consists of canal excavation and they are using a class-20 Bucyrus electric dragline. The power is furnished them by the Great Falls Power Co. and the electric installation has proved very successful and much cheaper than a steam shovel would have been in that country.

H. J. McNichols Co., Chicago, have just started work on the Argyle St. and Norwood Park Sewer, consisting of 16 miles of brick sewer varying in size from 9 feet to 4 feet. The depth of cut varies from 18 feet to 22 deep. They are using a Bucyrus 60-C and a Bucyrus 45-C shovels, a Parson trench excavator, a McKeen drag scraper, and Boehm's backfiller on this job. The surplus will be removed by teans.

Kansas

Pittsburg and Vicinity

By W. S. Russell

The wet weather as noted last month is about over and only in showers which come occasionally and not enough to make the roads bad or hinder coal stripping operations. The roads are now dry but somewhat rough where they are not much traveled.

The activity of the zinc smelters has increased the demand for dead coal and prices have advanced materially.

The stripping steam shovels are practically all working and several new ones are bing installed.

The coal market is quiet and no perceptible increase in the demand for domestic or industrial consumption and prices are about the same as last month. We quote as follows:—Lump per ton $1.85; Nut per ton, $1.85; Mine run per ton $1.65; Mill run per ton $1.30; Slack per ton $1.35; f. o. b. railroad cars at the mines.

The real hot weather is now upon us and we may expect August to sustain its past reputation as a scorcher and to make the corn grow which is backward this year and needs hot sun. Pittsburg is as lively as ever and a good deal of building is going on. This town and Joplin are prosperous and everybody appears to be doing well.

The Bucyrus class-225-B revolving steam shovel purchased by the J. R. Crowe Coal and Mining Company started digging on July 15th and is now in operation about a mile south of Scammon, Kansas. Charles H. Flynn erecting engineer for the Bucyrus Company supervised the trial test.

The class 225-B revolving steam shovel purchased by the Oklahoma Mining and Stripping Company is now being erected near Lehigh, Oklahoma and when completed will strip coal for the M. K. & T. R. R. Frank Wilkinson of the Bucyrus Company is in charge of the erection.

Mr. Henry Jenkins of Scammon recently purchased the entire plant and outfit of the Pratt-Durkee Coal Company at Skidmore, Kansas, including the 2½-yard steam shovel and will install the outfit on his 30-acre strip field about a mile south of Scammon where he has an extra good vein of coal about 3½-feet in thickness. The overburden will run from 12 feet to 18 feet in depth.

S. A. Pratt of the Pratt-Durkee Coal Company, has moved from Columbus, to his former home in Detroit, Michigan.

H. J. Sternberg of Memphis, J. G. Starr and W. M. Hauk of Joplin, and O. S. Hubert of Minden were guests at the Stilwell Hotel luncheon Sunday before last. These gentlemen are actively interested in the Minden Coal Company where they are operating a coal stripping plant.

Ira Clemens and family are at the Panama exposition seeing the sights and we trust they are having a good time.

E. P. White of Smith, Scott & White has returned from a trip to Detroit, Michigan where he enjoyed some of the cool lake breezes.

Dan Miller and his son Tom are opening up a shaft mine near Clinton, Missouri. They are down about 40 feet to the coal and have a 3-foot vein of every good quality. They are experienced miners and will no doubt make it go all right.

E. K. Swigart, Vice-President of the Bucyrus Company of South Milwaukee, and S. E. Elmore, Chicago sales manager, were in Pittsburg for several days last week looking over coal stripping operations and calling on coal stripping friends and acquaintances.

D. H. Whitmer, manager of the Whitmer Contracting Company, is now getting along nicely with his coal stripping near Frontenac. The steam shovel has dug through the ledge of rock encountered and is now fair material. They are now shipping coal every day.

There are good opportunities for parties having means to engage in coal stripping in the Kansas field. Strip coal land can be bought or leased at reasonable prices and there is good money in the business. Further information will be furnished by addressing W. S. Russell, Stilwell Hotel, Pittsburg, Kansas.

The Bucyrus Company have a stock of repairs for their coal stripping steam shovels at the Pittsburg Machinery Company Store room which is a great convenience to owners of Bucyrus steam shovels.

The Pittsburg Machinery Company are located at 806 North Broadway where they occupy an entire building with a large stock of coal miners, mill, railroad and contractors supplies, tools, machinery, engines, boilers, pumps, motors etc., for either steam, gasoline, or electric. Also repairs for Bucyrus steam shovels. W. L. Sullivan, general manager, will be glad to see you.

Kentucky

Pineville—Contract has been awarded to Grant Mason, Pineville, Ky., for extending Martins Fork line to Grays Branch for the Louisville & Nashville Railroad.

Louisiana

New Orleans and Vicinity

By "The Byrons"

A. V. Wills & Co. of Pittsfield, Ill. was awarded contract at Bartow, Fla. by the Peace River Drainage District to construct one hundred and forty-two miles of drainage ditches. The work consists of about 2,500,000 yards of excavation. It is wet work and will be done with dredges.

Major Slattery received bids on July 12 about 1,450,000 of levee dike work above Greenville, Miss. The bids were all rejected as the Major considered them to high. The lowest bid was that of R. L. Leonard & Co. at 28.70. This was a time job and was to be completed by December first of this year.

Major Markham received bids on 700,000 yards of levee work and awarded about 400,000 yards of it as follows:—W. T. & M. Lawrence Bros., 125,000 yards at 17 cents, Lennan Bros & Tanze, 200,000 yards at 1.98, R. H. & G. A. McWilliams, 84,000 yards at 15 cents. The balance of the work was not awarded owing to the lack of funds.

Mr. R. Lowrie is operating a class-9½ Bucyrus dragline for the Clem Gravel Co. of Dallas. This machine is in operation near Carrollton, Texas.

Mr. H. C. Gass of San Antonio has been awarded contract for constructing sewers in Fair Grounds district in San Antonio at $19,775. Mr. Gass will use his 18-B Bucyrus sewer shovel on the above work.

The Tupelo Dredging Co. of Tupelo, Miss. was awarded contract for constructing Big Creek Drainage Canal in McNairy County, Tenn. Their price was 6-2-3 cents. The canal is 5.76 miles long. The contract calls for completion of the work by February 15, 1916.

Anyone interested in the puchase of a second hand revolving shovel do well to communicate with the New Orleans office of the Bucyrus Co., at 1105 Hennen Building.

N. C. Williamson & Co. of Millikin, La. was awarded about 520,000 yards of levee enlargement in the upper Texas District. Their bid on this work was .1487. The above is all team work.

Mr. W. E. Callahan and Mr. Heyser of the Callahan Construc- Co. of Kansas City, were callers at this office last week and advised that they had purchased a class-14 Bucyrus dragline, second-hand of the Louisiana Contracting Co. of this city and were moving it on their levee job which they just received at McClure, Ill. The above gentlemen advise that all of their other work is progressing very satisfactorily. They have about completed their work at Leland, Miss.

Mr. J. S. Whitley was a caller in this office the other day and advises that he is on his way to take a position with D. B. Hearin & Son on their levee work near Baton Rouge. Mr. Whitley will operate one of the above company's class-24 Bucyrus draglines.

The southern sales office of the Bucyrus Co. now located at 1105 Hennen Building, New Orleans would be pleased to have steam shovel, dragline and dredge crews file their names and address with them, as they have many calls for crews.

J. T. McCarthy & Co. of Gainesville, Fla. have resumed work on their G. F. & A. R. R. contract near Broughton, Ala. This work has been shut down on account of finances of the R. R., but everything is arranged now so that the work will be rushed through to completion. Mr. Dan Downey is still in charge of the work and is assisted by Mr. Robert Vance who has charge of the shovel organizations. They are operating a 60-C and 70-C Bucyrus on this work.

Mr. F. B. Black, who is operating a 60-C Bucyrus shovel for the Henderson Cont. Co. on their Southern double track work near Brown Summit, N. C. writes that they will complete this work in the next week or ten days.

Mr. C. G. Kershaw of Birmingham, Ala. has started work on his contract with the Meridian and Memphis R. R. near Meridian. He has about 200,000 yards of earth to move and move same with his Bucyrus shovel.

Mr. Walter H. Denison of Memphis advises that he has sub-let most of Beulah levee work which he was awarded in May and which consists of 660,000 yards. He states he has sub-let the work as follows:—Sam Green & Sons of Beulah, 200,000 yards; Wm. McCarty, 200,000 yards; L. H. Busby, 60,000 yards; W. L. Grant, 60,000 yards.

Mr. T. W. Crow, president of the Jim Crow Coal Co. has just returned to Birmingham from a trip to Chicago where he has been in conference with other members of the company.

Work at Caldwell, Texas, consisting of 330,000 yards of levee work which was advertised to be let on June 26th, was not awarded and it is now advertised to be let on July 31st.

Mr. S. M. Spooner of Knoxville, Tenn. has taken a position with H. C. Gass & Co. of San Antonio, Tex. to operate their 18-B Bucyrus shovel on sewer work in their city.

Grey & Alexander of Vinton, La. were awarded on July 7th, about fifteen miles of open ditches by the Sulphur Drainage District No. 2 of West Lake, La.

The Dixie Portland Cement Co., of Richard City, Tenn. announces that Mr. Coleman C. Boyd has assumed the office of Purchasing Agent for their company, to succeed the late Clarence T. Whitworth.

Mr. John R. Scott of Memphis and St. Louis has let his White River levee work to Mr. Reeve Hutchinson of Chicago. Mr. Hutchinson also has some work of levee construction near there at Garland City, Ark. where he is using a class-24 Bucyrus dragline. Mr. Hutchinson will use three hundred-foot draglines on his White River work.

McIsaac-Gentry Co. of Chattanooga, Tenn. have just been awarded a large road contract in the vicinity of Chattanooga amounting to over $100,000.00. Mr. J. C. Ryan will have charge of this work and is planning to install a very large plant.

One of the largest operations in the blasting of sand rock was accomplished at the quarries of the Dixie Portland Cement Co. at Richard City, Tenn. when 250,000 tons of solid lime rock was blasted at one time. Moving pictures were taken of the blast and no doubt will prove interesting to all the world. The work was accomplished under the direction of Mr. W. H. Klein, superintendent.

Mr. Robt. Vance has associated himself with J. T. McCarthy Co. and is in charge of one of their Bucyrus shovel outfits on their G. F. & A. Ry. work near Monroeville, Ala. "Bob" reports things "hot" up in that country but the 70-C don't seem to mind it.

While business continues rather quiet up in the Birmingham, Ala. district, in general the furnaces and steel mills report an improvement and idle furnaces are continuing to "blow in" regularly. Some building is going on but the general contractor is still without much encouragement.

It is with much regret that we announce the death of Mr. Clarence T. Whitworth, Purchasing Agent of the Dixie Portland Cement Co., at his home in Richard City, Tenn., on July 8th, 1915.

Mr. Whitworth was a young man of very promising ability and his loss will be greatly felt by his company and those fortunate enough to have known him.

Labadeiville—Fernand Bernard is operating a dredge for D. B. Gore at Mira, La.

Massachussets

Boston—J. S. Packard Dredging Co. is low bidder for dredging 117,000 cubic yards from the flats in Lynn Harbor to enlarge the anchorage basin.

Minnesota

Shelly—John Addington is operating a Monighan dragline for the Union Drainage Company on their contract here. Mr. Addington is running the day shift and his brother Jim the opposite night shift.

News from the Twin Cities

By Clapp, Norstrom & Riley, 1306 Pioneer Bldg., St. Paul, Minn.

The Twin City Motor Speedway, the contract for which was let to Fredericks & Barnard of Minneapolis, is being rushed to completion and the roof is now being put on Grand Stand "E". 500 yards of crushed rocks and 3 carloads of cement are being delivered daily for the completing of the concrete track. The sub-way gangs are working day and night shifts. September 4th will see the opening of the motor races.

Richard Evans of Minneapolis has returned after finishing his Paducah, Ky. contract, and is well satisfied with the results. Mr. Evans looks younger than ever, in spite of his 69th birthday.

There will be some four million yards of ditch work let in

this state some time in August month, and a good many contractors are interested in this proposition. It turns out to be a dredge and drag line proposition.

Missouri

Fort Bellefontain—In our July number under our notes for St. Louis and vicinity, we made the statement that Sam Ballinger was superintendent for the St. Louis Portland Cement Company. This should have been Joseph Ballinger. Sam Ballinger operates the steam shovel and has charge of the shale pit at St. Louis. Mr. Joseph Ballinger tells us that the rain is causing the St. Louis Portland Cement Company a lot of trouble and that they have to be on the jump all the time fighting high water as the pit is located below the bed of the Missouri River.

St. Louis Items

Michel Labor Agency

Quite a number of construction and other jobs have made their appearance since our last issue. Things seems to be making a change for the better but labor of all kinds is scarce. Foreigners are especially scarce and railroads from the West and Northwest are again calling for men in the St. Louis market with little or no results.

Twelve bids were made on the levee work just south of East St. Louis for 800,000 yards of long haul steam shovel work for the East Side Levee Board on July 12th. J. Keeley of East St. Louis was low with his bid of 36 cent per yard. Geo. Gist was a close second with 36½. Other bidders, were J. B. Carter 52 cents —Walsh Construction Co. 46½ cents—John Marsch 38¾ cents— F. W. Kinser 42 cents—J. H. Flick 45 cents—J. A. Ware 38.8 cents—List & Gifford 44½ cents—Mason & Hanger 44 cents and H. H. Hall 49 cents. The concrete work of which there was about 300 yards was bid on from $7.25 to $15.00 per yard.

Up to the present writing the contract has not been awarded but in all probabilities Mr. Keeley will get it.

His address is 21st and State Street, East St. Louis.

M. D. McGuire a practical timekeeper and office man around construction work is in the market for a position of this kind. He can be reached any time 1021 Pierce Building St. Louis, Care John Scott & Sons. He is a nephew of the Scotts.

Frank McKee has a fully equipped boarding outfit idle. Ready to move on a moments notice. Address him Madison, Ill.

Mulville Bros. of Alton, Ill. have recently secured a levee contract at Wood River, Ill. They will move their outfit there as soon as the high water recedes.

H. B. Martin an all-around steam shovel superintendent, construction man and civil engineer as well, is here. Idle at present. Anyone needing such a man can find Mr. Martin care Michel, 9 South 9th Street, St. Louis.

J. D. Lynch has secured a small steam shovel job on the I. C. in Central Illinois last week. He will finish in about 60 days at that place and immediately move on another job for the same Co.

The Blodgett Construction Co. of Kansas City have been awarded contract for about 15 miles of new railroad work in Arkansas in the Ozark Mountains. The line will run from Mountain Home to Rothville.

The L. & N. Ry. awarded a portion of steam shovel work to Grant Mason of Pineville, Ky. This is an extension from Martins Fork to Grays Branch.

C. S. Jones returned from Columbus, Ohio where he secured another job for his team hutfit. They are in charge of Coke Gibson.

On July 31st the U. S. Government will let a large portion of levee and revetment work in Iowa and Illinois along the Mississippi River. Bids will be opened on that date by U. S. engineer office, Rock Island, Ill.

The M. K. & T. announces that the plans of this company are to do a lot of improvement work and extensions on their lines in Texas soon to the amount of about $400,000.

Mr. L. F. Lonnbladh, Dallas, Texas is chief engineer.

T. V. Vermillion and Sons were awarded quite a lot of work in Kentucky recently for the Cumberland & Manchester Ry. A great deal of this work is heavy rock work.

Several idle team outfits of various sizes here. Idle at present. Contractors wanting an outfit communicate with Michel.

C. G. Kershaw & Co. secured a contract from the Meridian and Memphis Ry. for the completion of its line to Meridian. Work has commenced this week.

Tom Walsh and Mr. Daly were some of the visitors in St. Louis last week. Tom says he is after some big game. Hope he lands it.

John Rodgers an all around rockman is around St. Louis, idle at present. Anyone needing such a party can reach him at at once by addressing him care Michel Labor Agency.

The Mississippi River again rose to the 30-foot stage and again delaying several Government contracts above and below St. Louis. Rust-Swift made preparations to resume work when the river was at 22 feet and were forced to halt owing to the re-rise.

Morris, Shepherd & Dougherty will finish their work at Paducah probably by November 1st. They are somewhat short of labor just now. They can use Austrians for steam shovel work from time to time. They are working this class of labor almost exclusively.

St. Louis—J. E. Luick is operating an 18-B Bucyrus shovel for the East St. Louis Stone Company. This company purchased this machine second hand from the Tidewater Construction Company of New York. The machine was shipped "knocked down" and was erected by Mr. Luick. Mr. Luick's present address is 8102 North Broadway, St. Louis.

Springfield—The Blodgett Construction Co., of Kansas City, has been awarded a contract by the Ozark Ry. for building the first link of its road from Mountain Home to Rothville, which lies in Baxter County, Ark. The road is to eventually extend from Little Rock to Springfield, and the section just let will cost approximately $1,000,000.

Mississippi

Vicksburg—R. L. Leonard & Co., Memphis, are low bidders at $0.287 per cubic yard, for 1,415,000 cubic yards of levee work for the Ashbrook Neck Spur Levee, above Greenville. Five bids were received on July 12, the District Engineer's Office recommending the rejection of each one. It is probable this work will be readvertised.

Union—A contract is reported let to C. G. Kershaw, Birmingham, Ala., for work on Meridian & Memphis R. R., involving the handling of about 200,000 cubic yards of earth. The company started work early this year on an extension from Union, Miss., west to Sebastopol, about 13 miles. This line will probably be extended to Carthage, about 30 miles from Union.

Montana

Fort Shaw—The West Coast Construction Co. and Hans Pederson, Madison Blk., Seattle, Wash., submitted the lowest bid on July 1 to the U. S. Reclamation Service for earthwork and

structures, first unit of laterals on Greenfields distribution system, Sun River Project, Montana. Their total bid on all schedules was $125,529. Winston Bros. Co., Globe Building, Minneapolis, bid $146,495, on all schedules, while the other six bidders bid on portions of the work only. The approximate quantities are 445,000 cubic yards of excavation; 4,290 cubic yards of reinforced concrete, the manufacture and laying of about 4,560 lineal feet of concrete pipe, and the placing in wooden structures of about 265,000 feet B. M. of lumber.

Nebraska

Omaha—W. G. Kilne has resigned his position for running a shovel for Porter Brothers and is at the present time located here. He is talking about raising poultry. It is reported that he may raise ostriches before he is through. We wish him success in his new industry.

Oregon

Portland and Vicinity

By L. T. Russell

The Standard American Dredging Company have their dredge at work pumping material for the fill approach to the Interstate bridge between Portland and Vancouver, Wash. The work is progressing nicely, with very little delay of any sort.

Morrison & Daley, contractors on the Intercounty dredging work near Tacoma, Washington, have started the new 22-inch dredge and expect to make rapid progress as soon as bearings and moving parts are adjusted, which will require only a few days.

Clarkson-Standifer Company have taken over the work on the Columbia Highway between Astoria, Oregon and St. Helens and hope to complete the job this season.

It is reported that three to four thousand men are in or near Seward, Alaska being drawn there by the railroad work now under way by the U. S. Government.

The O-W-R & N. Company are working a Bucyrus shovel in a gravel pit near Umatilla, Oregon digging ballast for the cut-off between Coyote and Pilot Rock Junction. R. W. Crowell is engineer.

Competition is very keen among the contractors in bidding on highway work with prices very low for excavation as well as for material.

Hans Pederson of Seattle reports that his class-14 Bucyrus dragline is busy on irrigation work near Burbank, Washington, with quite a lot of excavation ahead of it.

The Columbia Contract Company have recently started their Bucyrus shovel No. 906 digging rock for road purposes.

C. J. Cook has had a good deal of work on basement excavation this summer and is now sending out one of his Thew shovels on a road job with Earl Grider as engineer.

Work on paving the Columbia Highway is well under way. The successful bidders were the Warren Paving Company, Montague, O'Reilly and Clark & Henry of California.

Pennsylvania

Pittsburgh—Walter J. Person is operating and Albert White firing a Marion model 28 shovel for the Ott Brothers Company on the new Middletown Road just over the Kentucky line in Ingram. Wm. Ott is general superintendent of the job and is ably assisted by Joe Michels.

Scranton—Timothy Burke of this city has three of his six shovels at work at the present time. One 70-C is stripping coal at the Bliss Mines of the D. L. & W. Railroad near Nanticoke, Pa. It is operated by Charlie Lynch and craned by Jerry Coughlin. Another 70-C is at work at the new Loomis Mine of the D. L. & W., making sidings and elevating dump for tracks to the new breaker. Ham Largen is operating the shovel and John McCabe craning. Mr. Burke has also an 18-B Bucyrus revolving shovel in a culm bank at Dunmore, Pa. This shovel is operated by Earl Harrington. Thomas Harrington is superintendent over all three shovels.

Carbondale—Porter Brothers of Spokane, Washington, have a job on the Deleware & Hudson here making new yards.

Plymouth—The George F. Lee Coal Company are operating a Marion model 60, stripping coal here. R. Harvey is superintendent.

Philadelphia and Vicinity

By E. G. Lewis

James F. Brogan of Philadelphia, has been awarded a 20,000 yard excavating contract by the City of Philadelphia. This work comprises the extention of the Cobbs Creek Boulevard.

The contract for the New York Connecting Railroad which includes a quantity of masonry and some 275,000 yards of excavation has been awarded by the Pennsylvania Railroad to Wilson & English of New York, and P. W. McManus of Philadelphia.

McMenimen & Sims of Philadelphia have been awarded by the Pennsylvania Railroad a contract covering masonry and 200,000 yards of fill at Freeport, Pa.

Mr. Edward F. Saxton, who was formerly connected with the highway department of the City of Philadelphia, has been appointed Assistant Director of Wharves, Docks and Ferries of Philadelphia.

A. M. Taylor, Director of Public Works, Philadelphia will open bids on August 16th, covering contract No. 101 which is the first section of the new Philadelphia subway. This work constitutes construction of subway under the City Hall, north on Broad Street and includes City Hall station and Broad Street station. A preliminary appropriation of $50,000,000 has been made to cover this work, and much interest is manifested by Philadelphia contractors in these bids.

Tennessee

Oneida—Contract for building 11 miles of railroad from Oneida to Petros is reported to have been awarded to J. C. Rodes & Co., of Franklin.

Texas

A contract is reported let to Ward & Lee, Floresville, Tex., for work on The Oklahoma & Texas Southern. The company plans to build from Denton, Tex., northwest to Buckburnette and later north of the Red River. W. R. Heagler, Potosi, Mo., is chief engineer.

Virginia

Richmond and Vicinity

By J. G. Skelton

The Southern Railway has concluded its preparations to push to completion a stretch of double-tracking in Georgia and South Carolina on that portion of the road over which traffic is especially heavy and announcement is made that the work will be completed within the next eighteen months.

Authority was granted by the state railroad commission today for the issue of $3,500,000 worth of bonds on the Atlanta and Charlotte Air Line, which is operated under what is virtually a perpetual lease by the Southern, and the application for the authority to issue these bonds sets out that the money derived from the bonds is to be used for double-tracking.

The total amount of the line to be thus improved is seventy-seven miles, of which fifty-six miles lie between Spartanburg and Central in South Carolina and twenty-one miles between Cornelia and New Holland in Georgia.

The road says it has already arranged for handling the bonds, that the money will be immediately forthcoming for them, the contract for the track work has been let and that work will start at once.

Charlottesville—Work on the Chesapeake & Ohio Northern in Ohio is being pushed. Rinehart & Dennis who have the general contract have sublet 360,000 yards from the Ohio River to the Little Scioto to Langhorne & Langhorne who are using a model 60 and a model 80 Marion shovel thereon. The Rinehart & Dennis Company have retained for themselves the section from the Little Scioto River to Dan White Hollow and are using two 70-C Bucyrus shovels. The work is heavy, consisting mostly of rock. Hunt-Forbes Company are doing mile 82 and part of mile 83. Mile 83 which is only 3,500 feet long and includes 536,000 yards, is being handled by W. H. H. Allen Construction Company with headquarters at Sciotoville, Ohio.

All the material is to go into one fill. They are using on this job the following equipment:—Two model 41 Marion shovels. 27, 4-yard 36 inch Western cars. 12 5-yard, 36-inch Western cars. Two 12-ton, one 14-ton and one 18-ton Vulcan dinkies, and one 12-ton Baldwin dinkey.

The shovels are operated by D. A. Abernathy and R. J. Parsons and craned by C. A. Arrington and Samuel Brinkley. Tom Murray is superintendent and B. B. Allen is general manager. The work is just getting well under way.

Jake Secrest, engineer and A. S. Talley, cranesman, have been running a 70-ton Bucyrus for Rinehart & Dennis. They quit recently and both are looking for another job.

Tom Staples, engineer and Jack Garet, cranesman are running an 80-C Bucyrus for Langhorne, Langhorne & Snead.

Charlie Bibb is running a 65-ton Bucyrus for Hunt-Forbes on day shift and Pat Jacobs is running same at night.

Washington

Tacoma—Gurthrie, McDougal & Company, of St, Paul, Minn., and Portland, Oregon, have been awarded the contract by the Great Northern Ry. Co. for the construction of the West Okanogan irrigation project near Tonasket, Washington. The work consists of 60 miles of main canals, flume and syphons and will water about 10,000 acres of land. The water is to be taken by gravity from the Similkameen River 7 miles above Oronville. It is said this contract will approximate $510,650.00.

Wisconsin

Milwaukee—R. J. Leonhardt who has for many years been operating a class 24 Bucyrus dragline for the Natomas Consolidated of California on their reclamation project near Sacramento, is at the present time in the employ of the Bucyrus Company as a dragline erecting engineer. He may be addressed, Care of Bucyrus Company, South Milwaukee, Wisconsin. Mr. Leonhardt has recently completed the erection of a new class-14 Bucyrus dragline excavator, mounted on caterpillars, for the Floesch Construction Co., at Cape Girardeau, Mo.

PROSPECTIVE CONSTRUCTION

Arkansas

The Ozark Southern Ry. proposes to build a line from Harrison, Ark., through Elmwood, Marble City and Jasper to Parthenon. The estimated cost is $600,000. G. H. T. Shaw, Lee Center, Ill., is chief engineer.

Canada

Announcement is made that through an arrangement with the Canadian and British Columbia governments the Pacific Great Eastern has secured funds to continue construction work on the line between Vancouver, B. C., and Fort George. The line is now in operation out of North Vancouver towards Squamish, and from Squamish to Lillooet, 120 miles. Considerable work has been done between Lillooet and Fort George, and the company expects to have 100 miles additional completed during 1915.

Colorado

It is reported that certain Denver bankers are pushing the plan for the extension of the newly created Rocky Mountain National Park from the Lincoln Highway on the north to the Ocean-to-Ocean Highway to Colorado Springs, on the south. It is planned to ask the Federal Government to construct a scenic driveway along the eastern ridge of the Continental Divide connecting the Lincoln Highway to the Ocean-to-Ocean Highway.

It is announced that between four and five million dollars will be spent by the Denver & Rio Grande Railroad within the next twelve months for the construction of a standard-gauge line connecting Durango, Colo. with the present main line of the system. Surveys are now being made. The new line will begin at South Fork, a station on the Creede branch of the Rio Grande and will extend in a southwesterly direction for a distance of twelve miles, where it will join the present Durango-Alamosa line at Juanita. From Juanita to Durango the present narrow-gauge line will be standard-gauged. The total distance of the new line will be about 72 miles and will include a 3,000-foot tunnel under the summit of South Fork Pass. This new line will reduce the grade from 4 per cent to 2 per cent and will shorten the milage between Denver and Durango to 17 miles.

Proposals will be received until Aug. 9, by the Rio.Grande Drainage District, Monte Vista, Colo., O. A. Cramer, Sec., for the construction of 17 miles of drainage outlet ditches, approximating 325,000 cubic yards of earth excavation.

Florida

County Commissioners will on Aug. 4 ask for bids on 896,202 cubic yards of excavation for the Gamble Creek Drainage District, Bradentown, Fla. About 75 acres of right of way will be cleared. Upon the acceptance of a bid on the work, the Commissioners will ask for bids for the purchase of the bonds to cover the cost of construction and after these bonds have been sold the contract will be awarded. Chas. S. Hill, engineer, P. O. Box 83, Palmetto, Fla.

The Florida East Coast Ry. has under consideration the question of building an extension of the Maytown-Okeechobee branch from Okeechobee, Fla., south around the eastern shore of Lake Okeechobee, thence east to West Palm Beach.

The Southern Investment Company is planning to build a railway from Placida, Fla., on the Charlotte Harbor & Northern, northwest towards Venice on the Seaboard Air Line, about 22 miles. L. M. Williams, president; J. G. Earnest, secretary, Richmond, Va.

Georgia

Preliminary surveys are being made in order to determine what changes in track arrangement will be necessary for Macon's new $1,000,000 terminal. It is said that excavation for this terminal will be started in October. The call for bids have not as yet been advertised.

The Ocilla, Pinebloom & Valdosta Ry., 11-mile line in Coffee County, Ga., which passes through Willacooche has been bought by the Henderson Lumber Company, of which J. A Anderson, Ocilla, Ga., is president. It is understood that the line will be extended on the northern end from Lax northwest to Ocilla, 15 miles, and on the southern end from Pinebloom southeast to Homerville, about 28 miles.

The Southern Railway will push to completion, a stretch of double-tracking in Georgia and South Carolina. It is said that this work will be completed within the next eighteen months.

Louisiana

Surveys are being made by the Cady Lumber Company, McNary, La., for a line to be built to connect with the Texas & Pacific and the Chicago, Rock Island & Pacific at Lamourie.

Mississippi

A road which will be known as the Yazoo & Southern Railroad, has been organized to construct a line from Yazoo City to Carthage, Miss. a distance of about 62 miles.

Missouri

The St. Louis Railway & Dock Company has been incorporated in Missouri with $250,000 capital, to build a terminal railroad in St.Louis County and the City of St. Louis, Mo., about 25 miles long. The projected route is from a point north of the St. Louis city limits near the Columbia Bottom Road in a general southerly direction to a point near Van Buren and Catalan Streets. The incorporators include W. J. Holbrook, J. T. Moore, E. W. Banister, D. A. Bowman, J. Hill and H. F. Bell, all of St. Louis, Mo.

Montana

Bids will be received until 2 p. m., August 12, by U. S. Reclamation Service, Malta, Mont., for about 355,000 cu. yards of canal excavation. The work is located from 3 to 10 miles from Saco, Mont., on the Great Northern Railway.

The Teton Reservoir Co. expects to complete this year excavation on 15 miles of irrigation ditches in the vicinity of Choteau, Teton County. The work planned for this season will consist of about 300,000 yards of dirt, while considerable more is planned for the 1916 season in the building of irrigation ditches. Senator Tom Larson is reported to be interested.

New Mexico

The $500,000.00 New Mexico State Highway bond issue has been sold and the money in the bank ready for distribution to various counties. Much needed highway work has been held up pending the sale. While a comparatively small sum, it will mean completion of several roads that will bring New Mexico right in line with neighboring states and give them several roads second to none.

Oregon

The Oregon-Washington Railroad & Navigation Company, will build a 30-mile extension from Riverside to Crane Creek Gap in Harney county, Oregon. Contracts for grading and bridges will be awarded soon. The track will be laid by company forces. The maximum grade is 1 per cent.

According to late reports, construction work on the standard-gauge railroad from Roseburg, Ore., eastward into a timber tract, to cost $1,500,000, will be started early in August. S. A. Kendall of Pittsburgh, Pa., and A. Welch, Portland, are interested.

Pennsylvania

Bids will be opened by A. M. Taylor director of Public Works in Philadelphia, on August 16th for the first section of the new Philadelphia subway.

The D. L. & W. Railroad has not as yet asked for bids on their new Poconos cutoff, although it is possible that they may before long. This work which may call for about $10,000,000.00, extends from Cresco, Pa. to East Stroudsburg, Pa., a distance of about twelve miles. The cutoff from Clarks Summit, Pa. to Halstead, Pa. is ready for traffic.

South Carolina

The Augusta-Aiken Railway & Electric Corporation has increased its capital stock, it is said, from $1,500,000 to $2,500,000, and, it is understood, is planning to build an extension from Aiken, S. C., northeast to Columbia, about 50 miles.

South Dakota

Announcement has been made from Waubay, S. D., of the completion of surveys for the new branch line of the Huron & Northwestern R. R. from Wallace to Pickerel Lake. Bonds to cover construction cost have been sold.

Tennessee

The general contract for constructing a proposed line will be let by the Carolina, Greenville & Northern R. R., F. A. Kelley, chief engineer, Greenville, Tenn., in about 5 months.

Texas

The M. K. & T. Railway announces that it will do a considerable amount of improvement work and extensions on their Texas lines in the near future. The amount involved is about $40,000. L. F. Lonnbladh, Dallas, Texas is chief engineer.

It is announced that plans are under way to merge the properties of the Texas Traction Co. and the Southern Traction Co. The pending transaction involves the interurban electric lines radiating out of Dallas, Tex., and other holdings of the two companies. Following the consummation of the plans, work on an extension of the Southern Traction is to be started, it is said, south from Waco via Austin to San Antonio.

It is stated that work to complete the extension of the Artesian Belt from Christine, Tex., south to Crowther, 16 miles, on which grading work is already finished, will be carried out soon. Plans have been made to extend the line southeast via Beeville to some point on the Gulf coast. The company now operates a 43-mile line from Macdona south to Christine.

It is being considered by the St. Louis, Brownsville & Mexico Railway, Kingsville, Tex., to extend the branch line from Edinburg to Falfurrias, a distance of about 70 miles.

Virginia

The state railroad commission has granted the authority for the issue of $3,300,000.00 worth of bonds on the Atlanta and Charlotte Airline. The money derived from the bonds will be used for double-tracking in South Carolina and Georgia. Further information may be found in our "Shots from the Firing Line" in this issue under Virginia.

It has been announced that the Louisville & Nashville will shortly commence construction work on an 18-mile line from Blackley to the headwaters of Rockhouse Creek. W. H. Courtenay, Louisville, Ky., is chief engineer.

West Virginia

The Western Maryland Ry. Co has made survey for a spur 7 miles long from the Baltimore & Ohio Railroad at Farmington to the new coal mines of Consolidated Coal Co. on Helena Run. H. R. Pratt, Baltimore, Md., is chief engineer.

Surveys are under-way for constructing an 80-mile line from Bluefield through the coal fields of the Buchanan & Dickinson Company to a point on Elkshorn Creek by the Virginia Railway Company, Bluefield, W. Va.

REVIEW OF BOOKS and CATALOGS

We shall be glad to review in this column such books and catalogs as are sent to us. Books reviewed in these columns will be supplied by The Excavating Engineer Publishing Company at the prices named.

LOCOMOTIVES FOR PLANTATION SERVICE:—Catalogue 6 inch by 9 inch, 32 pages and cover, containing illustrations and abstracts of specifications of various types of locomotives for plantation service.

The Baldwin Locomotive Works,
Philadelphia, Pa.

BUREAU OF MINES, Bulletin No. 72—Occurance of explosive gasses in coal mines, by N. H. Barton. 248 pages, 7 pls., 33 figs.

Bureau of Mines,
Dept. of the Interior.,
Washington, D. C.

BUREAU OF MINES, Technical paper No. 84—Methods of preventing and limiting explosions in coal mines, by George S. Rice and L. M. Jones, 43 pages, 14 pls. 5 figs.

Bureau of Mines,
Dept. of the Interior,
Washington, D. C.

THE DU PONT POWDER COMPANY, realizing the growing need for an exhaustive bulletin written in a plain popular style covering the location, building and maintenance of roads, announces the publication of comprehensive treatise on this subject for free distribution.

Although the obvious purpose of this publication is to promote the rational use of explosives in road work, the text is much broader in its scope and covers phases of the subject far remote from the use of explosives. The introductory chapter consists of a discussion of the need of permanent roads and highways and their relation to civic and economic progress. Recommendations are given for permanent locations and the width and character of road desirable under different conditions. Detailed advice is given with regard to the removal of stumps and boulders from the right of way.

A chapter on drainage discusses every phase of the subject from the crowning of the surface to the control of large streams. Advice is given with regard to cut and fill work in hard ground and in rock for both straight and side hill cuts.

The chapter on road building equipment includes everything from the smallest drag scraper to rock crushers and steam shovels.

Special attention is given to the use of different classes of road surfacing material, and advice is given on the construction of earth, shell, sand clay, macadam, brick and concrete roads. This is followed by a chapter on the upkeep of country roads and by a treatise on explosives and their handling and use.

The book is fully illustrated with photographic views and special plan and sectional drawings of roads. It may be obtained free on request by anyone interested in the subject.

CONCRETE IN RAILROAD CONSTRUCTION:—6½ by 8⅞ inches, 228 pages and cover, illustrated. Another of a series of text books issued by the Atlas Portland Cement Company. This book is a treatise on concrete for railway engineers and contractors. It is replete with splendid illustrations, sketches, diagrams and tables. The following headings will give a conception of the subjects treated. Railroad construction, design and construction, bridges, culverts, piers and abutments, retaining walls, stations, sheds and platforms, coal and sand stations, etc., round houses and turn tables, signal boilers, etc., power stations, shops, warehouses, etc., storage reservoirs, docks, tunnels, concrete ties and roadbed, telegraph poles, etc., posts and fences.

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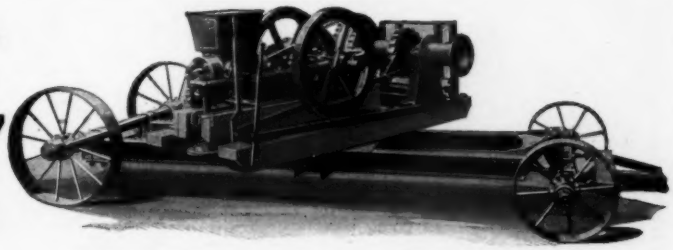

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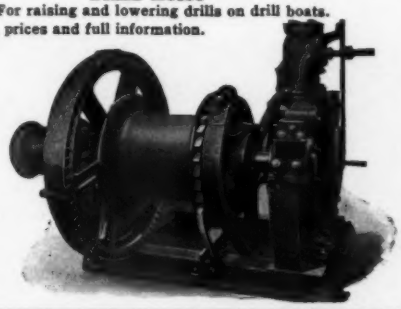
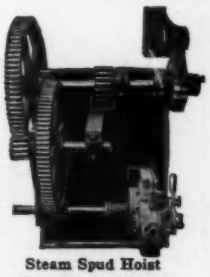


Write for Catalog of our Contractors and Marine Machinery



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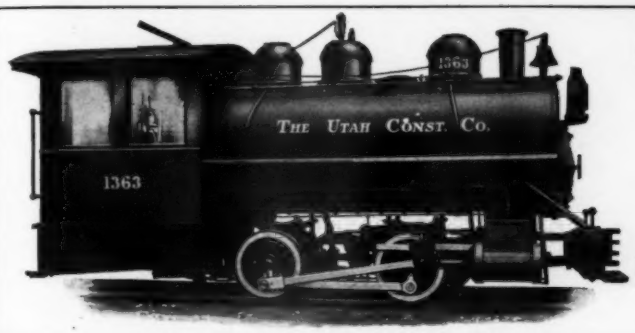

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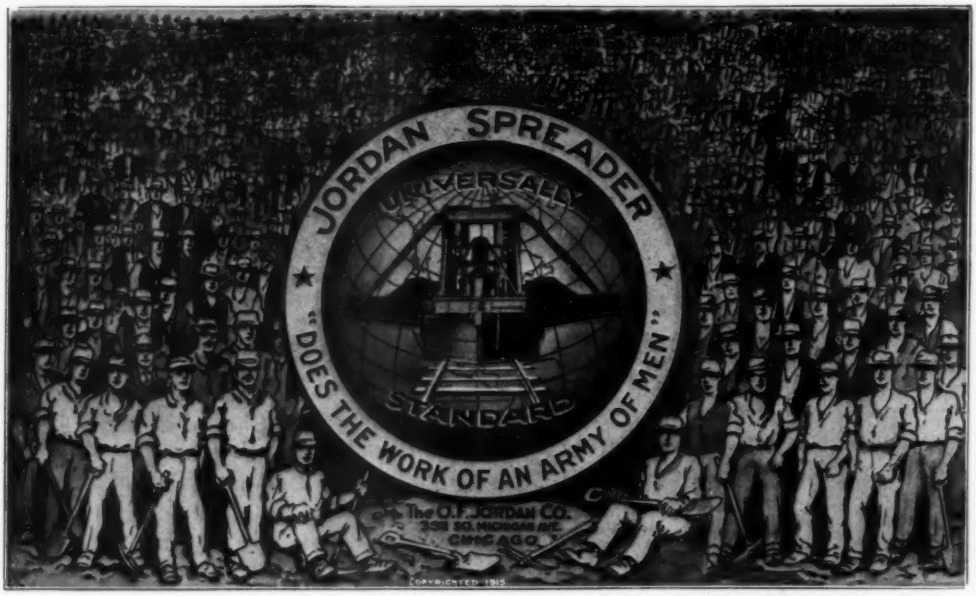

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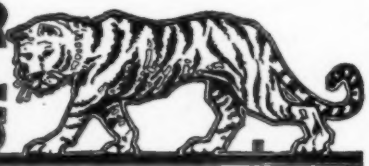

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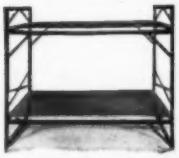

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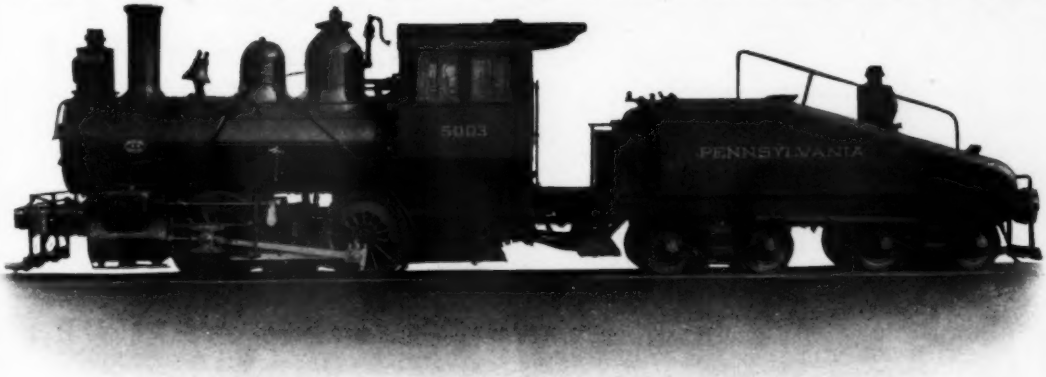

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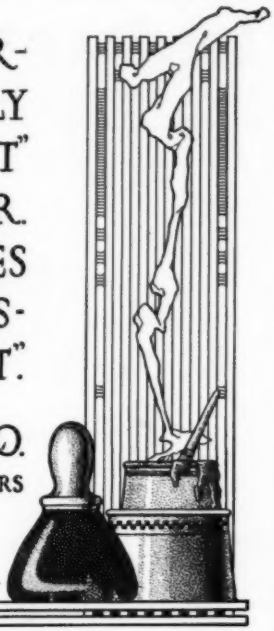

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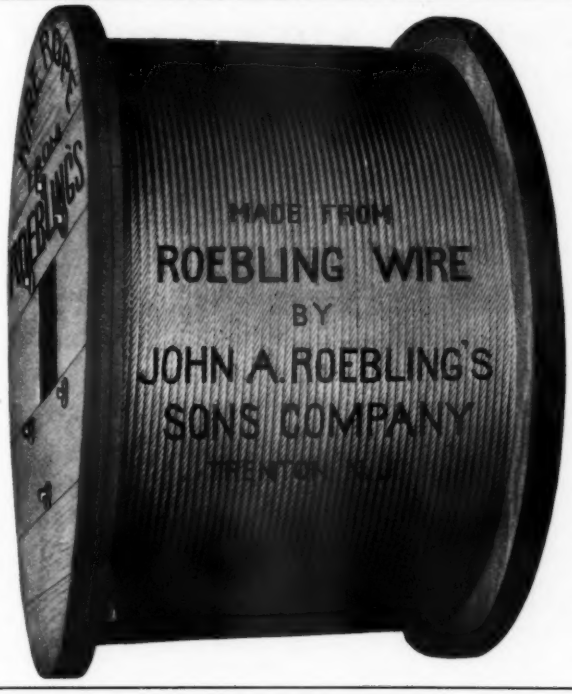

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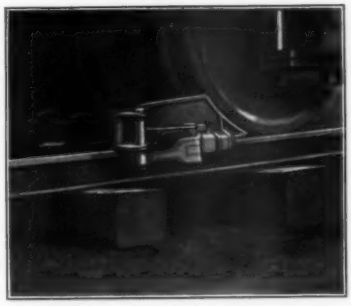

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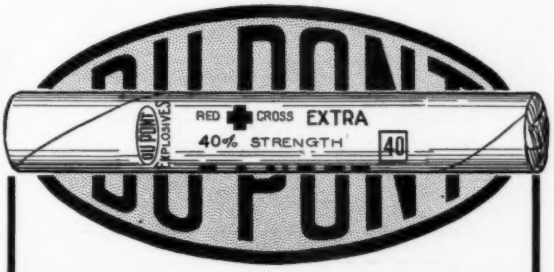

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